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                 STN User Update to be held August 22 in conjunction with the
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                 Pricing for the Save Answers for SciFinder Wizard within
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        AUG 27
                 BIOCOMMERCE: Changes and enhancements to content coverage
NEWS 16
NEWS 17
         AUG 27
                 BIOTECHABS/BIOTECHDS: Two new display fields added for legal
                 status data from INPADOC
NEWS 18
         SEP 01
                 INPADOC: New family current-awareness alert (SDI) available
NEWS 19
         SEP 01
                 New pricing for the Save Answers for SciFinder Wizard within
                 STN Express with Discover!
NEWS 20
         SEP 01 New display format, HITSTR, available in WPIDS/WPINDEX/WPIX
              JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT
NEWS EXPRESS
              MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
              AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004
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=> s transposase and positive and negative L2 69 TRANSPOSASE AND POSITIVE AND NEGATIVE

=> dup rem 12
PROCESSING COMPLETED FOR L2
L3 60 DUP REM L2 (9 DUPLICATES REMOVED)

=> s 13 and coda L4 0 L3 AND CODA

=> dup rem 14 L4 HAS NO ANSWERS

=> del 14 y

=> d 1-10 ti

- L3 ANSWER 1 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Method for identification of the indicators of contamination in liquid samples.
- L3 ANSWER 2 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
- TI The **positive** and **negative** regulation of Tn10 transposition by IHF is mediated by structurally asymmetric transposon arms
- ANSWER 3 OF 60 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.

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 DUPLICATE 2
- TI Germline transformation of the sawfly, Athalia rosae (Hymenoptera: Symphyta), mediated by a piggyBac-derived vector.

- L3 ANSWER 4 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. or STN
- TI Characterization of class 1 integron resistance gene cassettes and the identification of a novel IS-like element in Acinetobacter baumannii.
- L3 ANSWER 5 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3
- TI Long and short mRNAs transcribed from the medaka fish transposon Tol2 respectively exert **positive** and **negative** effects on excision
- L3 ANSWER 6 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
- TI Identification of genes affecting fluconazole susceptibility in Candida glabrata using a custom transposon.
- L3 ANSWER 7 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Transposable luciferase expression cassettes for Gram **positive** bacteria and their use to monitor bacterial infections by in situ bioluminescence
- L3 ANSWER 8 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Transposase-dependent formation of circular IS256 derivatives in Staphylococcus epidermidis and Staphylococcus aureus.
- L3 ANSWER 9 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
- TI Diversity of Tn4001 transposition products: The flanking IS256 elements can form tandem dimers and IS circles.
- L3 ANSWER 10 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Bacterial genomic islands: Organization, function, and evolutionary role.

=> d 2 ab

ANSWER 2 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1 AB The Tn10 transposome has sym. components on either side: there are two transposon ends each of which has binding sites for a monomer of transposase and an IHF heterodimer. The DNA bending activity of IHF stimulates assembly of an intermediate with tightly folded transposon ends in which transposase has addnl. subterminal' DNA contacts, located distal to the IHF site. These subterminal contacts are required to activate later steps in the reaction. Quant. hydroxyl radical footprinting and gel retardation unfolding expts. show that the transposome is fundamentally asym., despite having identical components on either side. Major differences between the transposon ends define α and $\boldsymbol{\beta}$ sides of the complex. IHF can dissociate from the transposon arm on the β side of the complex in the absence of metal ion. However, IHF is locked onto the α side of the complex, probably by the subterminal transposase contacts, until released by a metal ion-dependent conformational change. Later in the reaction, IHF inhibits target interactions. Using a very short transposon arm, target interactions are demonstrated at a saturating IHF concentration This suggests that

inhibition of target interactions is due to steric hindrance of the target binding site by a single IHF-folded transposon arm.

=> d 11-20 ti

L3 ANSWER 11 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on

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- TI Identification and broad dissemination of the CTX-M-14 beta-lactamase in the north west area of Spain.
- L3 ANSWER 12 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
- TI Occurrence of the tetracycline resistance gene tet(H) in Acinetobacter and Moraxella.
- L3 ANSWER 13 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. or STN
- TI Cloning of a genetically unstable cytochrome P-450 gene cluster involved in degradation of the pollutant ethyl tert-butyl ether by Rhodococcus ruber.
- L3 ANSWER 14 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Mercury resistance transposons of Gram-negative environmental bacteria and their classification.
- L3 ANSWER 15 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
- TI Identification of putative virulence genes in Burkholderia cepacia complex genomovar III.
- ANSWER 16 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
- TI Characterization of the ant(4')-IIb aminoglycoside resistance gene in Pseudomonas aeruginosa clinical isolate BM4492 from Bulgaria.
- L3 ANSWER 17 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
- TI Genetic linkage of the vanB2 gene cluster to Tn5382 in vancomycin-resistant enterococci and characterization of two novel insertion sequences.
- L3 ANSWER 18 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Transcription from fusion promoters generated during transposition of transposon Tn4652 is positively affected by integration host factor in Pseudomonas putida.
- L3 ANSWER 19 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Sleeping Beauty, a wide host-range transposon vector for genetic transformation in vertebrates.
- L3 ANSWER 20 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
- TI IS1294, a DNA element that transposes by RC transposition.

=> d 21-30 ti

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 DUPLICATE 4
- TI Multiple roles for TnpI recombinase in regulation of Tn5401 transposition in Bacillus thuringiensis.
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- TI Multiple independent defective Suppressor-mutator transposon insertions in Arabidopsis: a tool for functional genomics.
- L3 ANSWER 23 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. or STN
- TI Identification of an insertion-like genetic element in Mycoplasma orale which is highly homologous to the Mycoplasma fermentans ISLE.
- L3 ANSWER 24 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Tn552 transposase catalyzes concerted strand transfer in vitro.
- L3 ANSWER 25 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI A Vibrio cholerae pathogenicity island associated with epidemic and pandemic strains.
- L3 ANSWER 26 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. or STN
- TI Expression of the **transposase** gene tnpA of Tn4652 is positively affected by integration host factor.
- L3 ANSWER 27 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. or STN
- TI Tn5706, A transposon-like element from Pasteurella multocida mediating tetracycline resistance.
- L3 ANSWER 28 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI pTn5cat: A Tn5-derived genetic element to facilitate insertion mutagenesis, promoter probing, physical mapping, cloning, and marker exchanges in phytopathogenic and other gram-negative bacteria.
- L3 ANSWER 29 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Cloning and sequence analysis of a novel insertion element from plasmids harbored by the carbofuran-degrading bacterium, Sphingomonas sp. CF06.
- L3 ANSWER 30 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI The Deinococcus radiodurans uvrA gene: Identification of mutation sites in two mitomycin-sensitive strains and the first discovery of insertion sequence element from deinobacteria.

=> d 31-40 ti

- L3 ANSWER 31 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Testing transposable elements as genetic drive mechanisms using Drosophila P element constructs as a model system.
- L3 ANSWER 32 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Identification of IS1356, a new insertion sequence, and its association with IS402 in epidemic strains of Burkholderia cepacia infecting cystic fibrosis patients.
- L3 ANSWER 33 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Presence of unique repeated insertion sequences in nodulation genes of Rhizobium 'hedysari'.

- L3 ANSWER 34 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Enhancer-independent variants of phage Mu transposase: Enhancer-specific stimulation of catalytic activity by a partner transposase.
- L3 ANSWER 35 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 6
- Negative and positive regulation of Tn10/IS10-promoted recombination by IHF: two distinguishable processes inhibit transposition off of multicopy plasmid replicons and activate chromosomal events that favor evolution of new transposons
- L3 ANSWER 36 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. or STN
- TI Distribution of the streptomycin-resistance transposon Tn5393 among phylloplane and soil bacteria from managed agricultural habitats.
- L3 ANSWER 37 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. or STN
- TI The Corynebacterium xerosis Composite Transposon Tn5432 Consists of Two Identical Insertion Sequences, Designated IS1249, Flanking the Erythromycin Resistance Gene ermCX.
- L3 ANSWER 38 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Identification and activity of two insertion sequence elements in Rhodococcus sp. strain IGTS8.
- L3 ANSWER 39 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Isolation of a novel IS3 group insertion element and construction of an integration vector for Lactobacillus spp.
- L3 ANSWER 40 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
- TI Identification of the region that determines the specificity of binding of the transposases encoded by Tn3 and gamma-delta to the terminal inverted repeat sequences.

=> d 31 ab

- L3 ANSWER 31 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- AB The use of transposable elements (TEs) as genetic drive mechanisms was explored using Drosophila melanogaster as a model system. Alternative strategies, employing autonomous and nonautonomous P element constructs were compared for their efficiency in driving the ry+ allele into populations homozygous for a ry- allele at the genomic rosy locus. Transformed flies were introduced at 1%, 5%, and 10% starting frequencies to establish a series of populations that were monitored over the course of 40 generations, using both phenotypic and molecular assays. transposon-borne ry+ marker allele spread rapidly in almost all populations when introduced at 5% and 10% seed frequencies, but 1% introductions frequently failed to become established. A similar initial rapid increase in frequency of the ry+ transposon occurred in several control populations lacking a source of transposase. Constructs carrying ry+ markers also increased to moderate frequencies in the absence of selection on the marker. The results of Southern and in situ hybridization studies indicated a strong inverse relationship between the degree of conservation of construct integrity and transposition frequency. These finding have relevance to possible future applications of transposons as genetic drive mechanisms.

=> d 31 so

- L3 ANSWER 31 OF 60 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- SO Genetica (Dordrecht), (1997) Vol. 101, No. 1, pp. 13-33. print. CODEN: GENEA3. ISSN: 0016-6707.
- => s 13 and marker
- L4 5 L3 AND MARKER
- => d 1-5 ti
- L4 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Transposable luciferase expression cassettes for Gram **positive** bacteria and their use to monitor bacterial infections by in situ bioluminescence
- L4 ANSWER 2 OF 5 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN Identification of genes affecting fluconazole susceptibility in Candida glabrata using a custom transposon.
- ANSWER 3 OF 5 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN pTn5cat: A Tn5-derived genetic element to facilitate insertion mutagenesis, promoter probing, physical mapping, cloning, and marker exchanges in phytopathogenic and other gramnegative bacteria.
- L4 ANSWER 4 OF 5 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN Testing transposable elements as genetic drive mechanisms using Drosophila P element constructs as a model system.
- L4 ANSWER 5 OF 5 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN Identification of IS1356, a new insertion sequence, and its association with IS402 in epidemic strains of Burkholderia cepacia infecting cystic fibrosis patients.
- => s ac or ds and transpos? L5 107489 AC OR DS AND TRANSPOS?
- => del 15 y
- => s (ac or ds) and transpos? L5 1692 (AC OR DS) AND TRANSPOS?
- => s 15 and vector
- L6 107 L5 AND VECTOR
- => s 16 and transgenic
- L7 53 L6 AND TRANSGENIC
- => dup rem 17
- PROCESSING COMPLETED FOR L7
- L8 37 DUP REM L7 (16 DUPLICATES REMOVED)
- => d 1-10 ti
- L8 ANSWER 1 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Method for constructing a tag system comprising transposase -coding genes and use for tagging plant genes
- L8 ANSWER 2 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN

- TI GST-MAT vector for the efficient and practical removal of marker genes from transgenic plants
- L8 ANSWER 3 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Methods for site-associated modification of gene activity and nucleic acid structure
- ANSWER 4 OF 37 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.

 (2004) on STN

 DUPLICATE 1
- TI Transposon-mediated single-copy gene delivery leads to increased transgene expression stability in barley.
- L8 ANSWER 5 OF 37 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Timing of transposition of Ac mobile element in potato.
- L8 ANSWER 6 OF 37 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Activation of non-autonomous maize transposable element, Dissociation (Ds), by Ac-transposase in carrot.
- L8 ANSWER 7 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Transposon tagging and gene delivery in small grain cereals
- L8 ANSWER 8 OF 37 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Frequency and pattern of transposition of the maize transposable element Ds in transgenic rice plants.
- L8 ANSWER 9 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Improvement of a new transformation method: MAT vector system
- L8 ANSWER 10 OF 37 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Transformation of korean chrysanthemum (Dendranthema zawadskii X D. X grandiflorum) and insertion of the maize autonomous element **Ac** using Agrobacterium tumefaciens.
- => d pi
- => d 2 so
- L8 ANSWER 2 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- SO Molecular Methods of Plant Analysis (2002), 22(Testing for Genetic Manipulation in Plants), 95-117
 CODEN: MMPADO

DATE

- => d pi
- L8 ANSWER 1 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN PATENT NO. KIND DATE APPLICATION NO.

=> d 4 so

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 (2004) on STN DUPLICATE 1
- Plant physiology, Mar 2001. Vol. 125, No. 3. p. 1354-1362
 Publisher: Rockville, MD: American Society of Plant Physiologists, 1926-CODEN: PLPHAY; ISSN: 0032-0889

=> d 6 so

- L8 ANSWER 6 OF 37 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- SO In Vitro Cellular and Developmental Biology Animal, (March, 2001) Vol. 37, No. 3 Part 2, pp. 35.A. print.
 Meeting Info.: Congress on In Vitro Biology. St. Louis, Missouri, USA.
 June 16-20, 2001. Society for In Vitro Biology.
 ISSN: 1071-2690.

=> d 8 so

- L8 ANSWER 8 OF 37 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- SO Plant and Cell Physiology, (June, 2000) Vol. 41, No. 6, pp. 733-742. print.

 CODEN: PCPHA5. ISSN: 0032-0781.

=> d 10 so

- L8 ANSWER 10 OF 37 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- SO Journal of Genetics and Breeding, (January, 2000) Vol. 54, No. 1, pp. 19-24. print.
 ISSN: 0394-9257.

=> d 11-20 ti

- L8 ANSWER 11 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
- TI Germinal virus **vector** WDV (wheat dwarf virus)-mediated multiple insertions of a maize **transposon**, **Ds** (dissociation), in rice
- L8 ANSWER 12 OF 37 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.

 (2004) on STN DUPLICATE 3
- TI Effective selection system for generating marker-free transgenic plants independent of sexual crossing.
- L8 ANSWER 13 OF 37 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
- Insertion of the maize **transposable** element **Ac** into soybean (Glycine max L. Merr.) by Agrobacterium mediated transformation method.

- L8 ANSWER 14 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- TI P gene promoter constructs for floral-tissue preferred gene expression
- L8 ANSWER 15 OF 37 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI The transposition frequency of Tag1 elements is increased in transgenic Arabidopsis lines.
- L8 ANSWER 16 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4
- TI Transposition behavior of the maize transposable element Ac in transgenic haploid tobacco
- L8 ANSWER 17 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Green fluorescent protein expression constructs for use as a screenable marker for plant transformation
- L8 ANSWER 18 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Heterologous gene expression in **transgenic** plant using yeast GAL4 transcription factor fusion products to express the gene of interest
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 (2004) on STN

 DUPLICATE 5
- TI Selection of marker-free transgenic plants using the isopentenyl transferase gene.
- L8 ANSWER 20 OF 37 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI A transgenic mutant of Lactuca sativa (lettuce) with a T-DNA tightly linked to loss of downy mildew resistance.

=> d 11 ab

- L8 ANSWER 11 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
- Wheat dwarf virus (WDV) is a monocot-infecting geminivirus that replicates in infected tissue as double-stranded DNA. We evaluated whether the WDV vector system bearing Ds could be used as an effective insertional mutagen in rice. Mol. data showed that Ds was excised from WDV vectors once the WDV-carrying Ds (WDV:: Ds) and the genomic Ac vector were co-introduced into rice calli. Mature TO and T1 transgenic plants were analyzed for the distribution and inheritance of Ds inserts. Southern anal. indicated that the Ds elements excised from WDV vectors were stably inserted into genomes. The number of transposed Ds ranged from zero to three copies, among independent transformants. Meanwhile, untransposed Ds (WDV:: Ds) were present in multiple-copies in genomes. Southern anal. of the selfed progeny of TO plants demonstrated that most WDV::Ds were co-segregated among siblings. This indicated that these elements were integrated into the same single loci. However, a few Ds were found to segregate independently from the majority of Ds. In this report, we discuss the efficiency of WDV vectors in generating multicopy Ds in rice genomes.

=> d 13 so

- L8 ANSWER 13 OF 37 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- SO Dirasat Agricultural Sciences, (May, 1999) Vol. 26, No. 2, pp. 226-239. print.
 ISSN: 1026-3764.

=> d 11 so

L8 ANSWER 11 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2 SO Journal of Plant Biology (2000), 43(1), 1-9 CODEN: JPBIEZ; ISSN: '1226-9239

=> d 13 ab

- L8 ANSWER 13 OF 37 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- The maize transporable element Ac (Activator) was introduced AB into soybean plants using Agrobacterium tumefaciens T-DNA. Cotyledons were inoculated with Agrobacterium tumefaciens strain A281 harboring the binary vectors pZACl and pZACl/R (containing the NPTII (neomycin phosphotransferase II) gene, beta-Glucoronidase gene, and the Ac maize transposable element). The method of transformation does not require intermediate callus formation steps; instead, it involves inoculation of the embryo axis attachment to the cotyledons which later produced multiple shoots. Identification of RO plants carrying the Ac element was done by Polymerase Chain Reaction (PCR) amplification of an internal fragment of the Ac sequence. PCR assay indicated the presence of the Ac element in the soybean R0 genome. Southern blot analysis of the genomic DNA isolated from R1 plants indicated integration and sexual transmission of the whole transferred DNA (NPTII, 35S promoter, Ac element, Nos-P, Nos-T, and GUS gene) into the soybean genome. The percentage of transformation was 24% (with pZAC1), and 10% (with pZAC1/R) of the regenerated plants that survived several cycles of kanamycin selection. Based on GUS assay, the Ac element was found to be relatively active in some of the soybean R1 plants. Blue sectors were detected in two individual transformed plants. Detection of GUS activity in some of the leaf tissue of the R1 transgenic plants indicated excision of the Ac element from the untranslated leader sequence of the GUS gene. Ac element followed a Mendelian pattern of inheritance, segregating in a 3:1 ratio in R1 progeny.

=> d 17 ab

L8ANSWER 17 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN ABA method for the production of transgenic plants is provided in which a vector carrying a gene encoding the green fluorescent protein is introduced into cells, the cells are screened for the protein and transformed cells are selected and regenerated. The cellular toxicity of the green fluorescent protein is circumvented by regulating expression of the gene encoding the protein or directing the protein to a subcellular compartment where it is not toxic to the cell. DNA constructs are provided for cell transformation in which the expression of a gene encoding the green fluorescent protein is placed under the control of an inducible promoter. In addition, DNA constructs are provided in which a nucleotide sequence encoding the green fluorescent protein is operably linked to a signal sequence which directs the expressed protein to a subcellular compartment where the protein is not toxic to the cell. Oxidative stress to plant cells transformed with GFP also can be ameliorated by transforming cells with an expression vector comprising genes encoding GFP and an oxygen scavenger enzyme such as superoxide dismutase. The toxicity of GFP in transformed plants can be eliminated by excising the screenable marker gene following detection of transformed cells or sectors. The FLP/FRT system is used in conjunction with GFP as a visible marker for transformation and FRT excision. nucleotide sequence optimized for expression of the green fluorescent

protein in plants is also provided. The use of the protein as a marker in the transformation and regeneration of maize is described. The efficiency of transformation with the GFP screenable marker was comparable to that with bialaphos as selectable marker.

=> d 17 pi

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| ΡI | WO 9741228 | | | | | A2 19971106 WO 1997-US768 | | | | | | 88 | 19970501 | | | | | | | |
| • | WO | 97412 | 228 | | | A3 | | 1997 | 1211 | | | | | | | | | | | |
| | | W: | AL, | AM, | AT, | AU, | AZ, | BA, | BB, | BG, | BR, | BY, | CA, | CH, | CN, | CU, | CZ, | DE, | | |
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| | | | GR, | ΙE, | IT, | LU, | MC, | NL, | PT, | SE, | BF, | ВJ, | CF, | CG, | CI, | CM, | GA, | GN, | | |
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| | CA | 2252 | 412 | | | AA 19971106 CA 199 | | | | | 997- | 2252 | 412 | 19970501 | | | | | | |
| | AU | 9729 | 983 | | | - A1 | 19971119 | | | AU 1997-29983 | | | | | | 19970501 | | | | |
| | AU | 730927 | | | B2 | | 2001 | 0322 | | | | | | | | | | | | |
| | ΕP | 904371 | | | A2 | | | | | EP 1997-924601 | | | | | 19 | 9970 | 501 | | | |
| | | R: | ΑT, | BE, | CH, | DE, | DK, | ES, | FR, | GB, | GR, | IT, | LI, | LU, | NL, | SE, | MC, | PT, | | |
| | | | ΙE, | FI | | | | | | | | | | | | | | | | |
| | US | 6486 | 382 | | • | B1 | | 2002 | 1126 | 1 | US 1 | 999-: | 2149 | 09 | | 1: | 9991: | 220 | | |

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 DUPLICATE 5
- Proceedings of the National Academy of Sciences of the United States of America, Mar 18, 1997. Vol. 94, No. 6. p. 2117-2121
 Publisher: Washington, D.C.: National Academy of Sciences,
 CODEN: PNASA6; ISSN: 0027-8424

=> d 19 ab

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 (2004) on STN DUPLICATE 5
- We have developed a new plant vector system for repeated AB transformation (called MAT for multi-autotransformation) in which a chimeric ipt gene, inserted into the transposable element Ac, is used as a selectable marker for transformation. Selectable marker genes conferring antibiotic or herbicide resistance, used to introduce economically valuable genes into crop plants, have three major problems: (i) the selective agents have negative effects on proliferation and differentiation of plant cells; (ii) there is uncertainty regarding the environmental impact of many selectable marker genes; (iii) it is difficult to perform recurrent transformations using the same selectable marker to pyramid desirable genes. The MAT vector system containing the ipt gene and the Ac element is designed to overcome these difficulties. When tobacco leaf segments were transformed and selected, subsequent excision of the modified Ac produced marker-free transgenic tobacco plants without sexual crosses or seed production. In addition, the chimeric ipt gene could be visually used

as a selectable marker for transformation of hybrid aspen (Populus sieboldii x Populus grandidentata). The chimeric ipt gene, therefore, is an attractive alternative to the most widely used selectable marker genes. The MAT vector system provides a promising way to shorten breeding time for genetically engineered crops. This method could be particularly valuable for fruit and forest trees, for which long generation times are a more significant barrier to breeding and genetic analysis.

=> d 21-30 ti

- L8 ANSWER 21 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- TI New transformation method (MATVS) regeneration of **transgenic** plants through internal manipulation of plant hormone
- L8 ANSWER 22 OF 37 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
- TI Ds excision from extrachromosomal geminivirus vector DNA is coupled to vector DNA replication in maize.
- L8 ANSWER 23 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 6
- TI The Hermes element from Musca domestica can **transpose** in four families of cyclorrhaphan flies
- L8 ANSWER 24 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Plant transformation vectors using a morphological marker and methods for eliminating the marker from transformed plants
- L8 ANSWER 25 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Biologically safe plant transformation system using transposable element and transposase gene
- L8 ANSWER 26 OF 37 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.

 (2004) on STN DUPLICATE 7
- TI A promoter identified in the 3' end of the Ac transposon can be activated by cis-acting elements in transgenic Arabidopsis lines.
- L8 ANSWER 27 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Localization of **Ds-transposon** containing T-DNA inserts in the diploid **transgenic** potato: Linkage to the R1 resistance gene against Phytophthora infestans (Mont.) de Bary
- L8 ANSWER 28 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Stability and expression of chimeric genes in Populus
- ANSWER 29 OF 37 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.

 (2004) on STN

 DUPLICATE 8
- TI Transposable elements as plant transformation vectors for long stretches of foreign DNA.
- L8 ANSWER 30 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Genetic engineering of eggplant (Solanum melongena L.)

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| ΡI | | | | | | | | | WO 1995-JP2283 | | | | | | | | | | |
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| | | | SN, | | | | | | | | | | | | _ | · | | | |
| | JP | 09154580 | | | A2 | | 1997 | 0617 | JP 1995-313432 | | | | | 19951025 | | | | | |
| | JP | 3256952 | | | B2 | | | | | A | | | | | | 0051 | | | |
| | JP | 20021655 | 31 | | | | | | JP 2001-345370 | | | | | | | | | | |
| | CA | 2162449 | | AA 19960510 | | | | | CA 1995-2162449 | | | | | | | | | | |
| | AU | 9538557 | | | A1 19960606 | | | | | AU 1995-38557 | | | | | 19951108 | | | | |
| | AU | 703485 | | | B2 19990325 A2 19960612 | | | | | EP 1995-117589 | | | | | 10051100 | | | | |
| | EP | 716147 | | | AZ | | 1996 | | | | | | | 19951106 | | | | | |
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| | RR | 9509485 9509715 | | | Δ | | 1997 | 1028 | | RR 1 | 1995- | 9715 | | | 1 | 9951 | 108 | | |
| | нп | 77074 | | | A2 | | 1998 | 0302 | BR 1995-9715 HU 1997-2174 | | | | | 19951108 | | | | | |
| | | 2149187 | | | | | | | RU 1997-109836 | | | | | | | | | | |
| | PL | 184707 | | | B1 2002: | | | | PL 1995-320201 | | | | | | | | | | |
| | | | | | A 1996121 | | | | | | | | | | | | | | |
| | | 1073624 | | | | | 20011024 | | | | | | | | | | | | |
| | | 5965791 | | | Α | | | | | | L995-! | | | | | | | | |
| | TW | 446539 | | , | В | | 2001 | 0721 | ı | TW 1 | Ĺ995- | 84112 | 2246 | | 1: | 9951 | 117 | | |
| | FI | 446539 9701961 | • | | Α | • | 1997 | 0707 | | FI 1 | L997- | 1961 | | | 1 | 9970 | 507 | | |
| | ИО | 9702108 | • | | Α | | 1997 | 0707 | : | NO 1 | 1997-: | 2108 | | | 1: | 9970 | 507 | | |
| | BG | 62892 | | | B1 | | 2000 | 1031 | | BG 1 | L 997 - | 1015 | 24 | | 1 | 9970 | 529 | | |
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ANSWER 24 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN 1.8 A vector for introducing a desired gene into a plant, uses a morphol. abnormality induction (MAI) gene as a marker, or an MAI gene and a sequence such as a transposable element that can be eliminated from the transformation construct. Methods for eliminating or inactivating the MAI gene using in vivo recombination mechanisms are also described. Vectors using the ipt (isopentenyltransferase) gene of Agrobacterium tumefaciens T-DNA driven by the 35S promoter as the morphol. marker and kanamycin resistance as a selectable marker were constructed and introduced into tobacco. Transgenic plants showing the expected morphol. were selected and shown to carry the transforming DNA. A derivative of this vector was constructed carrying the Ac transposon and an ipt gene that could be excised was constructed. Plants carrying this vector were selected as before and the elimination of the ipt gene, but not other markers or reporters was demonstrated. Transformation of a hybrid aspen (Populus sieboldii + P. grandidentata) is also demonstrated.

L8 ANSWER 25 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN SO U.S., 21 pp. Cont.-in-part of U.S. 5, 225, 341. CODEN: USXXAM

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| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
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| PΙ | US 5482852 | Α | 19960109 | US 1993-77787 | 19930615 |
| | US 5225341 | Α | 19930706 | US 1990-555271 | 19900719 |
| | ES 2197900 | Т3 | 20040116 | ES 1991-912391 | 19910701 |
| | US 5792924 | Α | 19980811 | US 1995-445606 | 19950522 |

=> d 25 ab

- L8 ANSWER 25 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- Methods are provided for producing transgenic plants that AB contain a gene of interest and that are free of foreign ancillary nucleic acids. These methods allow for the production of plants which thus contain a desired gene, but which are free of vector sequences and/or marker sequences used to transform the plant. The method of transforming such plants calls for transforming the plants with a gene of interest by introduction of the gene on a DNA construct comprising a transposon and foreign ancillary nucleic acids; crossing the transformed plant through self-crossing or with another plant to obtain F1 or more removed generation progeny; and utilizing a means for selecting those progeny that carry the gene of interest and are free of the ancillary nucleic acids. Such progeny may be detected biochem., by Southern hybridization, through the use of polymerase chain reaction procedures, and other methods available in the art. As an illustrative example, the insect control protein gene (B.t.k.) from Bacillus thuringiensis kurstaki was inserted into tomato using the transformation vector PTV101, which contains both the transposase gene and the Ds element on the same pMON200 derivative During the regeneration of the primary transformant, the Ds portion of the construction bearing the B.t.k. gene transposes to a new genomic location catalyzed by the transposase. The chimeric Ds and the donor **vector**, now devoid of **Ds**, will independently assort in the progeny. Thus, a certain proportion of the plants will contain a Ds sequence bearing the B.t.k. gene but do not contain any other sequences contributed by the donor plasmid. Ds-B.t.k. portion is now stable because the transposase gene has been eliminated along with the rest of the donor sequences. B.t.k. gene-**Ds** construction may also be cloned with the transposase sequences on sep. plasmids. A selectable marker (e.g., β -glucuronidase or neomycin phosphotransferase II gene) inserted within a Ds element may be removed from a transgenic plant while retaining the gene of interest.

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 DUPLICATE 7
- AB In experiments directed to develop a promoter trap strategy in Arabidopsis, using a **Ds** chimaeric element containing a promoterless beta-glucuronidase (GUS) gene, we identified a promoter in the 3' end region of the **Ac transposable** element. The promoter initiates most of the transcripts at coordinate 4250 in the **Ac** sequence and is oriented towards the internal part of the element. When fused to a promoterless GUS gene, the promoter allows transient expression in Arabidopsis leaves. After stable integration into the Arabidopsis genome, no GUS activity was observed in most of the transformed lines analysed. Only two of them exhibited different tissue-specific GUS expression. When a CaMV 35S promoter was introduced into the transformation **vector**, downstream to the reporter gene, a high level of GUS activity was observed in all the transformants. These

results strongly suggest that the promoter is not normally expressed at a significant level in Arabidopsis transformed lines except when activated by neighbouring cis-acting enhancer elements. This opens an interesting possibility for using this promoter to develop 'enhancer trap' strategies in Arabidopsis. Since only one Ac transcript, initiating in the 5' end region of the element has been reported to date in maize, the putative biological function of the promoter remains an open question.

=> d 29 ab

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 (2004) on STN

 DUPLICATE 8
- The production of transgenic plants is now routine for most crops. However, using currently available transformation methods it is still difficult and time-consuming to obtain a collection of transformed individuals containing single or low-copy-number, intact transgenic inserts. Here we describe a set of broad-host-range transformation vectors based on the Ac/Ds transposition system that improve both transformation efficiency and the quality of transgenic loci. These vectors efficiently deliver long stretches of foreign DNA into the genome, leading to transgenic strains containing an intact single-copy insert of 10kb. This type of vector could be an important additional tool for the production of transgenic plants with the well-defined, foreign DNA inserts required for biosafety approval and commercialisation.

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 DUPLICATE 8
- SO Theoretical and applied genetics, Nov 1995. Vol. 91, No. 6/7. p. 899-906 Publisher: Berlin; Springer-Verlag CODEN: THAGA6; ISSN: 0040-5752

=> d 31-37 ti

- ANSWER 31 OF 37 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
- TI Analysis of splice donor and acceptor site function in a **transposable** gene trap derived from the maize element Activator.
- L8 ANSWER 32 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 9
- TI Genetic transformation of pea by the **vector** containing maize **Ds**-element by electroporation procedure
- ANSWER 33 OF 37 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN

- TI Interplasmid transposition of Drosophila hobo elements in non-drosophilid insects.
- L8 ANSWER 34 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Transposition mediated re-positioning and subsequent elimination of marker genes from transgenic tomato
- L8 ANSWER 35 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Removal of unwanted sequences from transforming DNA integrated into plant genomes
- L8 ANSWER 36 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Plant DNA virus **vector** for the transformation of plants and process for the production of **transgenic** plants
- ANSWER 37 OF 37 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.

 (2004) on STN

 DUPLICATE 10
- TI Properties of the maize transposable element Activator in transgenic tobacco plants: a versatile inter-species genetic tool.

=> d 31 ab

- ANSWER 31 OF 37 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
- AB Gene trap vectors have been used in insertional mutagenesis in animal systems to clone genes with interesting patterns of expression. These vectors are designed to allow the expression of a reporter gene when the vector inserts into a transcribed region. In this paper we examine alternative splicing events that result in the expression of a GUS reporter gene carried on a Ds element which has been designed as a gene trap vector for plants. We have developed a rapid and reliable method based on PCR to study such events. Many splice donor sites were observed in the 3' Ac border. The relative frequency of utilisation of certain splice donor and acceptor sites differed between tobacco and Arabidopsis. A higher stringency of splicing was observed in Arabidopsis.

=> d 34 ab

- L8 ANSWER 34 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- The authors describe a new plant transformation vector system AB which utilizes the transposition functions of the maize Ac/Ds transposable element family to re-position transgenes in transgenic crop plants. The practical applications of the system are two-fold. It allows the production of plants which exhibit a range of different stabilizable transgene expression levels following a single primary transformation event, and it allows for the elimination of specific transgene sequences-such as a selectable marker gene-subsequent to the transformation event. The authors have demonstrated the system using the NptII selectable marker gene and a Ds element containing the GUS reporter gene. Progeny plants were recovered from primary transformants from which either the NptII gene or the Ds/GUS element have been eliminated. The authors also show that the expression level of the GUS gene within both individual and amplified Ds elements can vary as a function of their position in the genome following transposition.

- L8 ANSWER 34 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN
- SO Bio/Technology (1993), 11(11), 1286-92 CODEN: BTCHDA; ISSN: 0733-222X

=> d 35 ab

L8 ANSWER 35 OF 37 CAPLUS COPYRIGHT 2004 ACS on STN

AB A method for removal of unwanted sequences from transforming DNA in plants in order to minimize biol. containment problems is described. The method uses **transposons** to minimize the quantity of DNA integrated into the plant genome, and crossing and selection for plants with the min. of ancillary DNA. A method using the Ac/Ds system of Zea mays to introduce a δ -endotoxin genes into tomato is described.

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| L8 | ANSWER 35 OF 37 CAPATENT NO. | APLUS COPYRIGHT 2004 ACS on STN KIND DATE APPLICATION NO. | DATE |
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| | | | |
| ΡĪ | WO 9201370 | A1 19920206 WO 1991-US4679 | 19910701 |
| | W: AU, CA, JP | | |
| | RW: AT, BE, CH, | , DE, DK, ES, FR, GB, GR, IT, LU, NL, SE | |
| | US 5225341 | A 19930706 US 1990-555271 | 19900719 |
| | AU 9181022 | A1 19920218 AU 1991-81022 | 19910701 |
| | AU 660620 | B2 19950706 | |
| | JP 05508993 | T2 19931216 JP 1991-511955 | 19910701 |
| | EP 577598 | A1 19940112 EP 1991-912391 | 19910701 |
| | EP 577598 | B1 20030305 | |
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| | CA 2087610 | C 20000912 CA 1991-2087610 | 19910701 |
| | AT 233819 | E 20030315 AT 1991-912391 | 19910701 |
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L10 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN TI Compositions and methods for targeted gene insertion

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| ΡI | WO | 2000 | 0752 | 89 | | A1 | | 2000 | 1214 | , | WO 2 | 000- | US15 | 783 | | 2 | 00006 | 803 |
| | WO 2000075289 | | | | | C1 | C1 20040219 | | | | | | | | | | | |
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| | | | MD, | MG, | MK, | MN, | MW, | MX, | NO, | NZ, | PL, | PT, | RO, | RU, | SD, | SE, | SG, | SI, |
| | | | SK, | SL, | ТJ, | TM, | TR, | TT, | TZ, | UΑ, | UG, | US, | UZ, | VΝ, | YU, | ZA, | ZW, | AM, |
| | | | AZ, | BY, | KG, | ΚZ, | MD, | RU, | ΤJ, | TM | | | | | | | | |
| | | RW: | GH, | GM, | KE, | LS, | MW, | MZ, | SD, | SL, | SZ, | TZ, | UG, | ZW, | AT, | BE, | CH, | CY, |

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L12 2 DUP REM L11 (0 DUPLICATES REMOVED)

=> d 1-2 ti

L12 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN TI Compositions and methods for targeted gene insertion

L12 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN
TI From footprint to function: an approach to study gene expression and regulatory factors in transgenic plants

=> d 2 ab

L12 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

AB A review, with 37 refs., of some of the recent work on the characterization of cis- and trans-acting elements in plants. The major focus is on results which relate to the architecture of plant promoters. Recent technol. advances such as cloning of trans-acting factors by transposon tagging or expression library screening are reviewed. Future prospects in the study of plant gene expression with relation to development are discussed.

=> d 2 so

L12 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN SO Genetic Engineering (New York, NY, United States) (1990), 12, 73-86 CODEN: GENGDC; ISSN: 0196-3716

=> s 19 and ds L13 5 L9 AND DS

=> dup rem 113
PROCESSING COMPLETED FOR L13
L14 3 DUP REM L13 (2 DUPLICATES REMOVED)

=> d 1-3 ti

- L14 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
 TI H2O2 induces a transient multi-phase cell cycle arrest in mouse fibroblasts through modulating cyclin D and p21Cip1 expression
- L14 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
 TI BCR-ABL and interleukin 3 promote hematopoietic cell proliferation and survival through modulation of cyclin D2 and p27Kip1 expression
- L14 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN TI Compositions and methods for targeted gene insertion
- => s 19 and homologous recombination L15 6 L9 AND HOMOLOGOUS RECOMBINATION

=> dup rem 115
PROCESSING COMPLETED FOR L15
L16 4 DUP REM L15 (2 DUPLICATES REMOVED)

=> d 1-4 ti

- L16 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Compositions and methods for targeted gene insertion
- L16 ANSWER 2 OF 4 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Targeted gene insertion in higher plants via homologous recombination.
- L16 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Targeted disruption in Arabidopsis
- L16 ANSWER 4 OF 4 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.

 (2004) on STN DUPLICATE 1
- TI Targeted disruption of the TGA3 locus in Arabidopsis thaliana.

=> d 2 ab

L16 ANSWER 2 OF 4 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

=> d 2 so

L16 ANSWER 2 OF 4 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN SO In Vitro Cellular and Developmental Biology Animal, (March, 1999) Vol. 35, No. 3 PART 2, pp. 20.A. print.

Meeting Info.: Congress on In Vitro Biology. New Orleans, Louisiana, USA.

June 5-9, 1999.
ISSN: 1071-2690.

=> d 3 ab

L16 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

AB The AGL5-MADS-box gene in Arabidopsis was successfully disrupted by homologous recombination.

=> d 3 so

L16 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN SO Nature (London) (1997), 389(6653), 802-803 CODEN: NATUAS; ISSN: 0028-0836